



CITY OF FALLS CHURCH

Development Services Department Staff Report Addendum

TO: Chair Lawrence and Members of the Planning Commission

FROM: Suzanne Cotellessa, AICP, Planning Director *(Sve)*

SUBJECT: **SITE PLAN 20090057 - 6607 Wilson Boulevard, BJ's Wholesale Club**

DATE: March 27, 2009

After preparation of the staff report on the site plan application for the subject property, the following issues have arisen that we expect to resolve between the Planning Commission's work session and the public hearing for the project:

Parcel Access and Street Standards

- 1) As VDOT maintains Wilson along the stretch in front of BJ's they will require an entrance permit. Securing this permit through VDOT will take 3 weeks and may be done concurrently with our site plan review. VDOT has offered the following early comments, based on their entrance permit review process:
 - a. On the belief that the southwestern entrance will be the only entrance used for deliveries and emergency vehicles, no comment was made for the southeastern entrance regarding curb radii. However, they are requesting that the internal curb on the southeastern entrance be flared back toward the Jiffy Lube property to better prepare for a future alignment with Peyton St. *(Note that BJ's has been proposing to use the southeastern entrance for deliveries and emergency vehicles, so this remains to be resolved.)*
 - b. The curb radii for the southwestern entrance need to be increased to 35-feet.
 - c. The interparcel access easement should be shown from front of the property back to property boundary of Jiffy Lube. This will allow future alignment with the Peyton St intersection. *(BJ's originally proposed a more narrowly defined easement toward the back of the property boundary of Jiffy Lube)*
- 2) Lane widths on Wilson must be 12-feet as Metro's new buses are 11-feet from mirror edge to mirror edge. Consequently, VDOT will no longer accept a waiver from the 12-feet standard if the road is served by Metro buses. *(Applicant will check to confirm that City's portion of roadway from the centerline accommodates the 12' lane widths).*

Low Impact Design (LID)/Green Elements

Since original submission, the applicant has worked to address the staff recommendation to install green elements on the site. The attached document (Attachment 1) is a newly planned bioretention swale that was submitted this morning and is currently under review by the City Engineer's office. Staff recommendation and appropriate site plan pages will be provided with the public hearing package.

Southeast Entrance Location/Site Access Analysis

The staff report recommends the relocation 10' westward of the current entrance at the SE corner of the site, based on the initial traffic impact analysis and gross accident data provided. The applicant has conducted a detailed analysis (see Attachment 2) that addresses more specifically the conflicts at this entrance to provide support for their preferred alternative. As noted in the cover email from the City Engineer, resolution of this issue will be partially dependent on addressing VDOT's informal comments noted above.

Attachment 1 Bioretention swale exhibit

Attachment 2 City Engineer email and applicant-provided Site Access Analysis

BIOSWALE COMPUTATIONS

BASED ON VEGRETATED SWALE SPECIFICATIONS IN THE
FAIRFAX CO. PWD CODE, 6-1-2008

REQUIRE AREA TO SWALE: 11.432 SF = 0.26 AC
REQUIRE AREA TO SWALE: 4.631 SF = 0.11 AC

LENGTH OF SWALE: 11' = 14.7'

(1) DETERMINE CHECK DAM HEIGHT, SPACING AND CHANNEL CROSS-SECTION FOR A
WATER QUALITY VOLUME (WQV) OF 0.5 FROM THE WETTED AREA (WQV 0.5)

(2) DETERMINE PROPOSED CHECK DAM HEIGHTS
CONSIDERING ROADS AND LOCATIONS FOR THE STAFF (TABLE 6.3 FROM PWD CODE, PWD)

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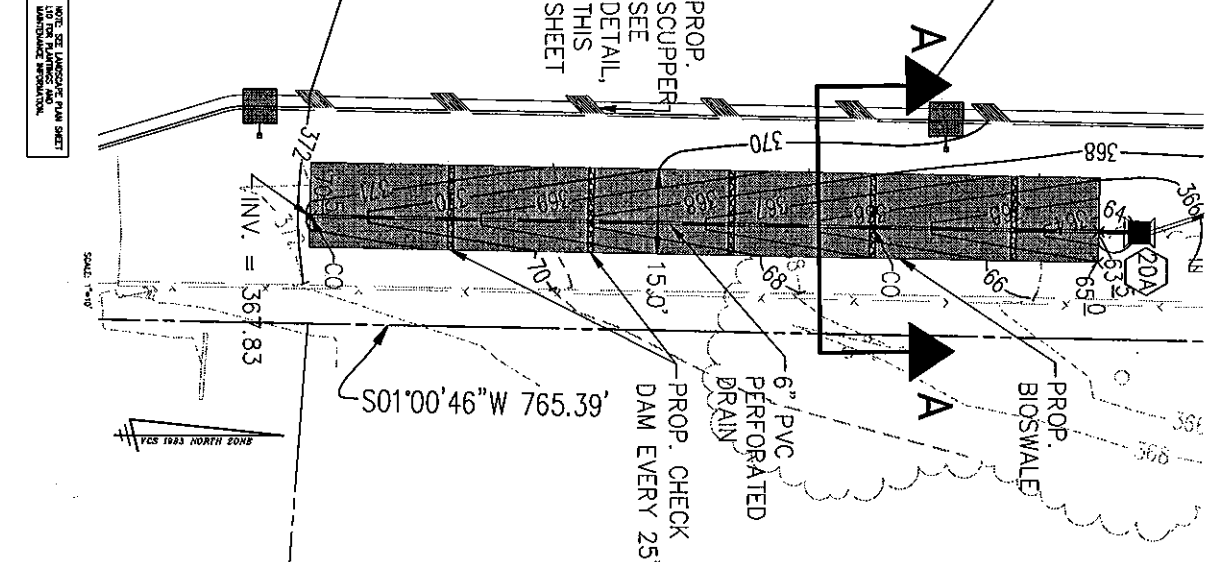
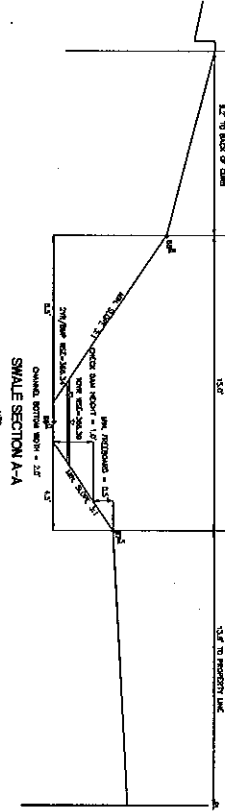
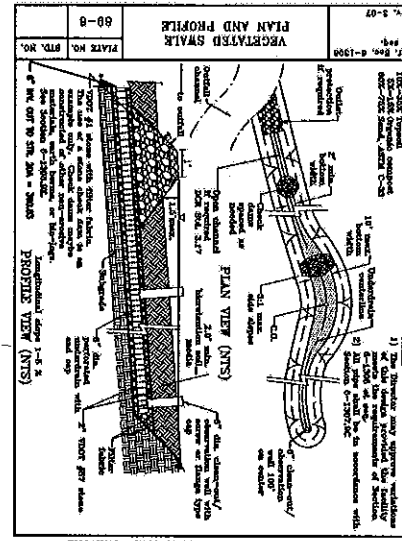
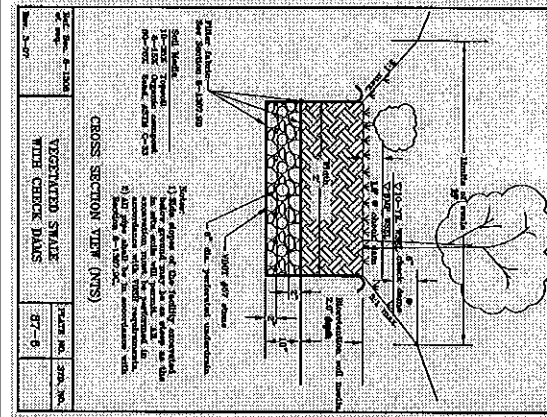
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FAIRFAX COUNTY PUBLIC FACILITIES MANUAL



BIOSWALE COMPUTATIONS AND DETAILS

BJ's WHOLESALE CLUB

CITY OF FALLS CHURCH, VIRGINIA

WALTER L. PHILLIPS

INCORPORATED

CIVIL ENGINEERS LAND SURVEYORS PLANNERS LANDSCAPE ARCHITECTS

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Suzanne Cotellessa

From: William Hicks
Sent: Friday, March 27, 2009 9:35 AM
To: Wendy Block Sanford; Cyrus Salehi; Suzanne Cotellessa
Cc: 'O'Connell, Charles'
Subject: RE: BJ's Entrance Memo with Accident Data
Attachments: BJ's Entrance Memo 032609.pdf

It appears from Chad's memorandum that there have been 5 accidents since 2006, 1 of which was a rear end collision - less likely mitigated through any of the alternatives. Consequently, 4 accidents over 3 years results in a much reduced accident rate than what was cited in the original TIA (30 over 5 years). I think that moving the intersection westward by 10-feet and the stop bar 25-feet forward on the westbound lane will do much to limit the confusion caused by the Jiffy Lube entrance proximity to the BJ's entrance. However, with this said, two confounding items still exist, a process issue and a substantive one: (1) the site plan submitted last week to the City does not include the modifications necessary for the preferred alternative; and (2) the informal VDOT comments, which were relayed to the applicant yesterday, may require additional site adjustments or consideration (e.g., increased curb radii, interparcel access and drive aisle configuration to accommodate a future intersection serving both BJ's and the Jiffy Lube parcel). It is the City's understanding that these informal comments will be formalized through the VDOT entrance permit process.

-Bill

Bill Hicks, P.E.
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From: Chad A. Baird [mailto:cab@goroveslade.com]
Sent: Friday, March 27, 2009 8:16 AM
To: Wendy Block Sanford; Cyrus Salehi; William Hicks; Suzanne Cotellessa
Cc: Felice B. Brychta
Subject: BJ's Entrance Memo with Accident Data

Wendy, Cyrus, Sue, and Bill,

Per your request, attached is the memorandum describing the eastern entrance alternatives (main entrance). Of note, we received the accident data (late afternoon yesterday) from the Police Department and have included the data within the memo.

Please call with any questions or comments.

Chad

3/27/2009

**MEMORANDUM**

TO: William Hicks City of Falls Church
Wendy Block Sanford City of Falls Church
Cyrus Salehi City of Falls Church
Suzanne Cotellessa City of Falls Church

CC: Peter Hopley BJ's Wholesale Club
George Goff BJ's Wholesale Club

FROM: Chad A. Baird
Felice B. Brychta

DATE: March 26, 2009

SUBJECT: BJ's Wholesale Club – Site Access

INTRODUCTION

The purpose of this memorandum is to provide additional information associated with the eastern entrance (main entrance) for the BJ's Wholesale Club proposed to be located on Wilson Boulevard in Falls Church, Virginia. This memo addresses issues raised by the City of Falls Church and provides supplemental information to the revised Gorove/Slade Associates Traffic Impact Analysis dated March 13, 2009.

The BJ's Wholesale Club is proposed to be located north Wilson Boulevard and west of Peyton Randolph Drive in City of Falls Church, Virginia. The property is currently occupied by a Noland Wholesale store. A traffic signal, which was installed at the intersection of Wilson Boulevard and Peyton Randolph Drive in 2004, controls all four approaches to the intersection. The main access to the BJ's Wholesale Club is proposed to be located at this intersection, replacing the existing signalized driveway with a more ideal entrance to the store. A secondary access will be located approximately 300 feet to the west on Wilson Boulevard, replacing the other existing driveway to the Noland store.

An existing Jiffy Lube is located on the adjacent property to the east. Access to this development is provided by a partial access (right-in/right-out) that operates in the field as a full access. The driveway is approximately 65 feet (centerline to centerline) from the existing signalized driveway to the Noland store. The current site plan proposes shifting the eastern edge of the existing signalized driveway approximately 10 feet to the west to accommodate the City's buffer requirement and widening the driveway to allow one northbound entering lane, a 4-foot striped area, and two southbound exiting lanes (one shared through-left

and one right turn lane).

The City of Falls Church staff has requested consideration of the following access alternatives by the development team:

Alternative 1. Shifting the primary BJ's access at approximately 10 feet to the west

Alternative 2. Relocating the stop bar for the westbound Wilson Boulevard approach east of the Jiffy Lube curb cut

Alternative 3. Relocating the primary BJ's access to the west driveway and signaling that intersection

After reviewing the above alternatives, it is our opinion that the current site plan is the preferred alternative. A discussion of the factors leading to this conclusion is presented below.

PREFERRED ALTERNATIVE

The preferred alternative proposes widening the existing signalized driveway at the intersection of Wilson Boulevard and Peyton Randolph Drive to provide the primary access to the BJ's Wholesale Club. In this alternative, the existing traffic signal will remain in its current location, and minimal signal modifications will be required. The crosswalk across Wilson Boulevard will be moved from the east side of the intersection to the west side of the intersection.

The City has expressed concern over the proximity of the existing Jiffy Lube driveway to the existing traffic signal. The City feels that the intersection, in its current state, is ambiguous and could be confusing to drivers accessing either the existing Noland store or the Jiffy Lube. The existing signalized site driveway is less than 18 feet wide and operates more like an alley than a standard driveway, while the Jiffy Lube driveway, which is approximately 45 feet wide, provides little guidance for patrons entering and exiting the site.

Under the preferred alternative, the southbound approach to the intersection will act and operate like a true four-legged signalized intersection, which is expected to provide more clarity to drivers as to what is the actual intersection. To provide better control of exiting Jiffy Lube customers, the stop bar will be shifted approximately 25 feet to the west. This improvement will shift the stop bar to the curbed section between the BJ's and Jiffy Lube driveways, rather than being located in the center of the Jiffy Lube exit lane. As previously mentioned, the eastern edge of the site driveway will be shifted approximately 10 feet to the west. This shift will allow for additional space between the two driveways, but also allows the site driveway to remain reasonably aligned with Peyton Randolph Drive. Due to the slight offset between the northbound and southbound approaches, the signal is proposed to provide split-phased operation for these two approaches. The split-phase operation will allow for the northbound and southbound approaches to operate under separate and protected phases.

Finally, as part of this alternative, the site has been designed to accommodate interparcel access with the Jiffy Lube property if and when it redevelops in the future. This interparcel connection will allow the Jiffy Lube site to access the signal in the future.

ALTERNATIVE 1: SHIFT DRIVEWAY TO WEST

This alternative is similar to the preferred alternative; however, it suggests shifting the southbound approach of the intersection of Wilson Boulevard and Peyton Randolph Boulevard approximately 10 additional feet to the west than the preferred alternative (20 feet west from its existing eastern edge). The reason for the proposed shift is to provide additional separation between the BJ's and Jiffy Lube driveways and to provide additional space for truck turning movements.

An autoturn analysis was conducted for trucks accessing the BJ's driveway at the currently proposed location. WB-50 and WB-67 trucks were assumed for this analysis. As shown in the attached figure, the current location of the site driveway provides adequate spacing for trucks entering and exiting the site.

In addition, while shifting the site driveway to the west would create additional space between the two driveways, it would also exacerbate the off-set that is occurring at this intersection between the northbound and southbound approaches. This offset would begin to make this signalized intersection two separate intersections, potentially confusing patrons.

ALTERNATIVE 2: RELOCATE STOP BAR TO EAST

Another alternative proposed by the City involves relocating the stop bar for the westbound Wilson Boulevard approach to the east side of the Jiffy Lube driveway. In this alternative, the traffic signal at the intersection of Wilson Boulevard would remain in its current location, and the southbound Jiffy Lube driveway approach would become signalized. As in the preferred alternative, the crosswalk across Wilson Boulevard would be moved from between the BJ's and Jiffy Lube driveways to the west side of the intersection.

This option would benefit the Jiffy Lube by providing a signalized access to their site. However, modifying the signal timings to accommodate the additional phases required for this movement would result in a failing level of service for the intersection. For example, providing signalization to a fifth leg would require an additional signal phase for this approach. Also, moving the stop bar to the east would introduce a conflict between the eastbound and westbound left turns, which in turn would prohibit these movements from operating concurrently. The westbound stacking distance along Wilson Boulevard would be reduced by 50-75 feet (3-4 cars) per lane. An additional signal pole and signal heads would need to be installed for the southbound approach, which would potentially require obtaining right-of-way on the south side of Wilson Boulevard.

Ultimately, due to the awkward configuration and multiple signal phases, it is our opinion that converting this to a five-legged intersection may make it more confusing for drivers than the current operation.

ALTERNATIVE 3: RELOCATE PRIMARY ACCESS AND PROVIDE NEW TRAFFIC SIGNAL

The third alternative consists of eliminating the southbound east access completely and providing a single access to the BJ's Wholesale Club to the west. In this alternative, a traffic signal would be installed at the intersection of Wilson Boulevard and the west driveway. The southbound approach to the intersection of Wilson Boulevard and Peyton Randolph Drive would be removed, the southbound signal heads and phase would be removed, and the left turn bay into the existing driveway would be removed.

This option would include the installation of a new traffic signal at the intersection of Wilson Boulevard and the western project driveway. It is highly unlikely that VDOT would allow a new signal approximately 300 feet from the Peyton Randolph Drive intersection. Therefore, if this signal were to be installed, the City would be required to take control (maintenance) of not only the west access signal, but the Peyton Randolph Drive and Roosevelt Boulevard signals. Wilson Boulevard is classified as an "Urban Principal Arterial" by VDOT, and according to VDOT standards, the minimum signal spacing for this type of roadway is approximately 2,640 feet. Operationally, it would be difficult to time these three signals in coordination so that queues do not overlap. A signal in this location would only provide approximately 200 feet for queuing to the east and 300 feet for queuing to the west. In addition, as in the previous alternative, installation of a signal at this location, if approved, would potentially require obtaining right-of-way on the south side of Wilson Boulevard.

An additional concern with signalizing this intersection is the coordination between the BJ's site and the adjacent property to the west. A driveway to this property is located approximately 50 feet west of the west project driveway. If this driveway remains open, a similar situation to the one at the intersection of Wilson Boulevard and Peyton Randolph Drive with the Jiffy Lube driveway is created. However, it is unknown whether the property owner of this site would consider closing their access to Wilson Boulevard to tie into the BJ's site for access to the traffic signal.

Finally, other than eliminating the southbound approach to the intersection, this alternative does not make any improvements to the intersection of Wilson Boulevard and Peyton Randolph Drive (the unsignalized access to Jiffy Lube still exists). Unless the Jiffy Lube access is signalized by others, the intersection will operate in a similar manner as it does today, which does not provide any additional guidance to patrons of the Jiffy Lube.

ACCIDENT DATA

A review of available accident history data was conducted for the intersection of Wilson Boulevard and the immediately surrounding area (within 500 feet of the intersection). Accident data for 2003 through April 2008 was obtained from VDOT and detailed accident reports for 2006 through 2008 were obtained from the Fairfax County Police Department.

According to the data provided by VDOT, 30 accidents occurred at this intersection between 2003 and 2008. However, it should be noted that 11 of the 30 accidents at this intersection occurred in 2003. A

traffic signal was installed at this intersection between July and December 2004 (we previously stated in the revised TIA dated March 13, 2009, that the signal was installed at the end of 2003, however, based on additional research it seems to be toward the end of 2004). Based on the information provided by VDOT, the data indicates that the accident rate has decreased following this improvement to an average of less than four accidents per year within 500 feet of the intersection.

The data received from the Fairfax County Police Department includes detailed accident reports for 2006 through 2008. This information provided data on three additional accidents during these three years that were not included in the data received from VDOT. The following table summarizes the accidents reported for 2006, 2007 and 2008 to both VDOT and Fairfax County.

Date	Source	Type of Accident	Location
5/7/2006	Fairfax County	Parked car struck	Wilson Boulevard
7/17/2006	Fairfax County/VDOT	Rear End	Wilson Boulevard (WB)
12/16-17/2006	Fairfax County/VDOT	Parked cars struck	Peyton Randolph Drive (NB)
12/22/2006	Fairfax County/VDOT	Cyclist Struck	Wilson Boulevard (EB)
12/22-23/2006	Fairfax County	Parked car struck	Wilson Boulevard
1/30/2007	VDOT	N/A	Peyton Randolph
2/24/2007	Fairfax County/VDOT	Left turn	Wilson Boulevard (WB) - left turn from property west of BJ's
6/4/2007	Fairfax County	Parked car struck	Wilson Boulevard
8/17/2007	Fairfax County/VDOT	Left turn	Wilson Boulevard (WB) - left turn from Jiffy Lube driveway
9/30/2007	Fairfax County/VDOT	Left turn	Wilson Boulevard (WB) - left turn into Jiffy Lube driveway
10/23/2007	VDOT	N/A	Peyton Randolph
11/13/2007	Fairfax County/VDOT	Parked car struck	Peyton Randolph Drive (NB)
4/18/2008	Fairfax County/VDOT	Left turn	Wilson Boulevard (WB) - left turn from Jiffy Lube driveway

The table above highlights in red the accidents that occurred within the intersection of Wilson Boulevard and Peyton Randolph Drive. As shown, there was a total of five accidents within the intersection over 2.5 years based on available information.

CONCLUSIONS

Based on the information outlined within this memorandum, the preferred alternative of widening and shifting the eastern edge of the existing signalized driveway approximately 10 feet to the west would be the best alternative to not only serve the BJ's site but the vehicular and pedestrian activity surrounding this intersection.